

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) **de Janasz, Chrisopher G.**
Application **10/563,187**
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Application Title **Vehicle-Based Wireless Identification System**
Art Unit **3621**
Latest Examiner **Le, Nancy Loan T.**

Mail Stop Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132
OF DR. STEPHEN G. WILSON

Sir:

I, Stephen G. Wilson, a citizen of the United States, whose full post office address is 309 Parkwood Place, Charlottesville, VA 22901, declare as follows under penalty of perjury.

Background

1. I hold a Ph.D. degree in Electrical Engineering from the University of Washington, awarded in 1975.
2. I hold an M.S. degree in Electrical Engineering from the University of Michigan, awarded in 1968.

3. I hold a B.S. degree in Electrical Engineering from Iowa State, awarded in 1967.
4. I am currently Professor of Electrical and Computer Engineering at the University of Virginia, Charlottesville, Virginia, where I am also Director of the Communication, Control, and Signal Processing Laboratory.
5. Since 1976, I have been a member of the faculty of the Electrical and Computer Engineering department at the University of Virginia, Charlottesville, Virginia, teaching graduate-level courses in communication engineering, digital communication and information theory and coding, as well as undergraduate courses in electrical circuits and electronics, signals and systems, and communication systems, and introduction to engineering design, and directing sponsored research in the applications of information theory and coding to modern communication systems.
6. I have authored a graduate level text titled "Digital Modulation and Coding" (Prentice-Hall, 1996), and approximately 100 journal and conference publications.
7. I have been area editor for Coding Theory and Applications of the IEEE Transactions on Communications.
8. I am the recipient of several awards for superior university teaching, including the Outstanding Young Professor Award (1985) and Distinguished Professor Awards (1987) of the University of Virginia Alumni Association and an Outstanding Faculty Award from the Commonwealth of Virginia (1987). In 1991, I was named Outstanding Engineering Educator by the Southeastern Section of American Society for Engineering Education.

Scope of Review

9. I have reviewed United States Patent Application 10/563,187 (hereinafter the "present application"), as amended by the Reply submitted herewith.

10. I know what a person having ordinary skill in the relevant art (i.e., the prior art that is relevant to the subject matter claimed and described in the present application) would have known on the priority date claimed by the present application (21 July 2003).
11. I have reviewed the USPTO Office Action dated 12 May 2009 (hereinafter the "present Office Action"), which rejects each of claims 1-33 of the present application under 35 U.S.C. 103(a) as being obvious, and thus unpatentable, over various combinations of of U.S. Patent 5,898,397 ("Murray"), U.S. Patent 5,748,101 ("Christensen"), U.S. Patent Application Publication 2002/0178063 ("Gravelle"), U.S. Patent 5,805,082 ("Hassett"), U.S. Patent 5,819,234 ("Slavin"), and/or U.S. Patent Application Publication 2003/0020634 ("Banerjee").
12. I have reviewed each of Murray, Christensen, Gravelle, Hassett, Slavin, and Banerjee.
13. Among the subject matter with which I was familiar prior to the priority date was subject matter of the type recited in Murray.
14. Among the subject matter with which I was familiar prior to the priority date was subject matter of the type recited in Christensen.
15. Among the subject matter with which I was familiar prior to the priority date was subject matter of the type recited in Gravelle.
16. Among the subject matter with which I was familiar prior to the priority date was subject matter of the type recited in Hassett.
17. Among the subject matter with which I was familiar prior to the priority date was subject matter of the type recited in Slavin.
18. Among the subject matter with which I was familiar prior to the priority date was subject matter of the type recited in Banerjee.
19. My statements herein are made solely from the perspective of a person having ordinary skill in the art as of the priority date ("a person having ordinary skill in the art").

Level of Skill

20. Given the nature of the problem solved by the claimed subject matter, the relevant prior art problems and solutions, and the education and experience levels of workers in the field of the claimed subject matter, a person having ordinary skill in the relevant art would hold at least a Masters degree in electrical engineering, and would have at least 5 years of experience in wireless communications.

The Cited Combinations Are Unreasonable and Deficient

21. As explained below, a person having ordinary skill in the art would have no good reason to consider the cited combinations, and even if considered, would find them deficient with respect to the claimed subject matter.

Murray is Not Pertinent

22. A person having ordinary skill in the art would have found that claims 1-34 are directed toward: "approval of a proposed financial transaction".
23. A person having ordinary skill in the art would have found that Murray is directed to "transmitting a coded signal for actuating a device" (see Abstract), and more specifically, to "generat[ing] an output signal to a control device to open a garage door, vehicle door lock, etc. (see col. 9, lines 48-51).
24. A person having ordinary skill in the art would not have found "approval of a proposed financial transaction" to be in the same field of endeavor as "generat[ing] an output signal to a control device to open a garage door, vehicle door lock, etc."
25. Likewise, a person having ordinary skill in the art would not have found "generat[ing] an output signal to a control device to open a garage door, vehicle door lock, etc." to be reasonably pertinent to the particular problem solved by the claimed subject matter.

26. Further, because they are directed at vastly different problems, a person having ordinary skill in the art would have considered Murray to be non-analogous art to that of the claimed subject matter, and thus would have found it unreasonable to consider Murray when attempting to solve the problem solved by the claimed subject matter.

Christensen is Not Pertinent

27. A person having ordinary skill in the art would have found that claims 1-34 are directed toward: "approval of a proposed financial transaction".
28. A person having ordinary skill in the art would have found that Christensen allegedly "relates to a device and system which enables entry access". (see col. 1, lines 10-11).
29. A person having ordinary skill in the art would not have found "approval of a proposed financial transaction" to be in the same field of endeavor as "a device and system which enables entry access".
30. Likewise, a person having ordinary skill in the art would not have found "a device and system which enables entry access" to be reasonably pertinent to the particular problem solved by the claimed subject matter.
31. Further, because they are directed at vastly different problems, a person having ordinary skill in the art would have considered Christensen to be non-analogous art to that of the claimed subject matter, and thus would have found it unreasonable to consider Christensen when attempting to solve the problem solved by the claimed subject matter.

Gravelle Does Not Cure the Combinations' Deficiencies

32. A person having ordinary skill in the art would have found that each of independent claims 1, 14, 15, and 34, from one of which each of claims 2-13 and

16-33 depends, is directed to “approval of a proposed financial transaction”, and recites, among other things,

- receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”;
- the “signal” or “information” “transmitted” or “provided from the wireless transmitter” “responsive to a predetermined input from a user”;
- the “signal” or “information” “requesting approval of a proposed financial transaction”; and
- caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface” (emphasis added).

33. A person having ordinary skill in the art would have found that Gravelle explains that its alleged “invention relates to... a payment system that uses RFID transponders” (see paragraph 0002).
34. A person having ordinary skill in the art would have found that Gravelle further explains that “an RFID tag may also be used as a... transponder” (see paragraph 0030).
35. To better understand RFID techniques, a person having ordinary skill in the art would have found that another cited reference, Hassett, explains that:

“a number of systems have been proposed for utilizing radio frequency identification (RFID) techniques for toll collection. Under these systems, drivers acquire a “tag” or card that acts as a reflective transmitter or discrete transmitter to identify the vehicle by serial number as it passes through a toll booth. This technique is also referred to as Automatic Vehicle Identification (AVI).” (see Hassett, col. 1, lines 61-67)

36. A person having ordinary skill in the art would have found and reasonably believed Hassett's statement that "RFID tags lack a processor or user interface" (see col. 2, lines 10-11).
37. Thus, a person having ordinary skill in the art would instantly recognize that, because it lacks a "user interface" a user would have no ability to provide input to Gravelle's "RFID transponder" or "tag".
38. Consequently, a person having ordinary skill in the art would not have found that Gravelle teaches receiv[ing] "a signal" or "information" "from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle", the "signal" or "information" "requesting approval of a proposed financial transaction" and "transmitted" or "provided from the wireless transmitter" **"responsive to a predetermined input from a user"**, and/or caus[ing] "information associated with the approval of the proposed financial transaction" "to be rendered to the user via a user interface".
39. Moreover, a person having ordinary skill in the art would have found that modifying Gravelle to provide a "signal" or "information" **"responsive to a predetermined input from a user"** and/or caus[ing] "information associated with the approval of the proposed financial transaction" "to be rendered to the user via a user interface" would have changed the principle of operation of Gravelle, rendered it inoperative, and/or rendered it unfit for its intended use, thereby discouraging that person from attempting the modification.

Hassett Does Not Cure the Combinations' Deficiencies

40. A person having ordinary skill in the art would have found that each of independent claims 1, 14, 15, and 34, from one of which each of claims 2-13 and 16-33 depends, is directed to "approval of a proposed financial transaction", and recites, among other things,

- receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”;
- the “signal” or “information” “transmitted” or “provided from the wireless transmitter” “responsive to a predetermined input from a user”;
- the “signal” or “information” “requesting approval of a proposed financial transaction”; and
- caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface” (emphasis added).

41. A person having ordinary skill in the art would have found that Hassett describes with respect to the “present invention”, a “vehicle transponder, also referred to as an in-vehicle component or ‘IVC’” (see col. 1, lines 30-35).

42. A person having ordinary skill in the art would have found that Hassett explains that:

When a motorist wishes to prepay tolls and load the IVC, the motorist proceeds to a local toll facility and gives the IVC to a toll collection agent with cash or a credit card authorization equal to the toll amount the motorist wishes to prepay. The toll collection agent connects the IVC communications port 64 to the cash terminal communications port 152, and enters into the cash terminal the monetary amount to be stored in the IVC memory for a specified toll authority account. (col. 24, lines 3-11).

43. Consequently, a person having ordinary skill in the art would not have found that Hassett teaches receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”, the “signal” or “information” “requesting approval of a proposed financial transaction” and “transmitted” or “provided from the wireless transmitter” “**responsive to a predetermined input from a user**”, and/or caus[ing] “information associated

with the approval of the proposed financial transaction” “to be rendered to the user via a user interface”.

44. Moreover, a person having ordinary skill in the art would have found that modifying Hassett to “transmit[]” or “provid[e]” any “signal” or “information” via a “wireless transmitter” **“responsive to a predetermined input from a user”** would have changed the principle of operation of Hassett, rendered it inoperative, and/or rendered it unfit for its intended use, thereby discouraging that person from attempting the modification.

Slavin Does Not Cure the Combinations’ Deficiencies

45. A person having ordinary skill in the art would have found that each of independent claims 1, 14, 15, and 34, from one of which each of claims 2-13 and 16-33 depends, is directed to “approval of a proposed financial transaction”, and recites, among other things,
- receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”;
 - the “signal” or “information” “transmitted” or “provided from the wireless transmitter” “responsive to a predetermined input from a user”;
 - the “signal” or “information” “requesting approval of a proposed financial transaction”; and
 - caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface” (emphasis added).
46. A person having ordinary skill in the art would have found that Slavin explains that “[t]he above and other objects of the invention are realized through the provision of the aforementioned sealed transponder kit and the operation thereof

in conjunction with the 10 existing E-ZPass centralized computer system” (see col. 4, lines 7-11).

47. A person having ordinary skill in the art would have found that Slavin explains that “[t]he heart of the E-ZPass system resides in technically unsophisticated transponders, carried in vehicles, which permit themselves to be interrogated by signals produced at 35 the toll plazas and which respond to those signals by transmitting a unique “tag number” identifying the transponder. This tag number is then associated with a pre-authorized account number in the central computer which reflects a prepaid dollar balance against which the toll is charged.” (see col. 1, lines 33-40).
48. A person having ordinary skill in the art would have found that another cited reference, Hassett, explains that such “tags lack a processor or user interface” (see Hassett, col. 2, lines 10-11).
49. Consequently, a person having ordinary skill in the art would not have found that Slavin teaches receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”, the “signal” or “information” “requesting approval of a proposed financial transaction” and “transmitted” or “provided from the wireless transmitter” **“responsive to a predetermined input from a user”**, and/or caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface”.
50. Moreover, a person having ordinary skill in the art would have found that modifying Slavin to provide a “signal” or “information” **“responsive to a predetermined input from a user”** and/or caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface” would have changed the principle of operation of Slavin, rendered it inoperative, and/or rendered it unfit for its intended use, thereby discouraging that person from attempting the modification.

Banerjee Does Not Cure the Combinations' Deficiencies

51. A person having ordinary skill in the art would have found that each of independent claims 1, 14, 15, and 34, from one of which each of claims 2-13 and 16-33 depends, is directed to “approval of a proposed financial transaction”, and recites, among other things,
- receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”;
 - the “signal” or “information” “transmitted” or “provided from the wireless transmitter” “responsive to a predetermined input from a user”;
 - the “signal” or “information” “requesting approval of a proposed financial transaction”; and
 - caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface” (emphasis added).
52. A person having ordinary skill in the art would have found that Banerjee describes “radio frequency identification (RFID) readers which interrogate transponders within a vehicle and identify the driver or vehicle. The driver/vehicle is associated with a user account and the user fee is charged directly to the account” (see paragraph 0009).
53. A person having ordinary skill in the art would have found that another cited reference, Hassett, explains that “RFID tags lack a processor or user interface” (see col. 2, lines 10-11).
54. Consequently, a person having ordinary skill in the art would not have found that Banerjee teaches receiv[ing] “a signal” or “information” “from a vehicle-powered non-telephonic wireless transmitter fixedly attached to a vehicle”, the “signal” or “information” “requesting approval of a proposed financial transaction” and

“transmitted” or “provided from the wireless transmitter” “**responsive to a predetermined input from a user**”, and/or caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface”.

55. Moreover, a person having ordinary skill in the art would have found that modifying Banerjee to provide a “signal” or “information” “**responsive to a predetermined input from a user**” and/or caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface” would have changed the principle of operation of Banerjee, rendered it inoperative, and/or rendered it unfit for its intended use, thereby discouraging that person from attempting the modification.

The Cited Combinations are Missing Claimed Elements

56. Even assuming for the sake of argument that a person having ordinary skill in the art had a reason to attempt to consider and combine the teachings of one or more of the cited references (which, given the above reasons, they clearly would not), and assuming for the sake of argument that any such combination would work (which, given the above reasons, it clearly would not), a person having ordinary skill in the art nevertheless would have found that each such combination fails to teach “requesting approval of a proposed financial transaction” “transmitted” or “provided from the wireless transmitter” “responsive to a predetermined input from a user” and/or caus[ing] “information associated with the approval of the proposed financial transaction” “to be rendered to the user via a user interface”.

Summary

57. Consequently, regarding the cited combined teachings of the cited references, a person having ordinary skill in the art at the priority date would have found:

- 58. no good reason to attempt to implement any cited combination to solve the problem solved by the subject matter of claims 1-34;
- 59. that any attempt at implementing any cited combination would not result in the subject matter of claims 1-34; and
- 60. that any attempt at implementing any cited combination would have rendered Murray, Christensen, Gravelle, Hassett, Slavin, and/or Banerjee inoperative, unfit for its intended purpose, or changed its principle of operation.

I further declare that all statements made herein of my own knowledge are true and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 24th day of September 2009



Stephen G. Wilson